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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/665,606

09/19/2003

Zafer Sahinoglu

6389

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EXAMINER

NGUYEN, LONG P

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

07/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/665,606

Applicant(s)

SAHINOGLU ET AL.

Examiner

Long P. Nguyen

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 9/19/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>May 26, 2004 9/19/2003</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al. (US 7,096,034, Hereinafter, Zhang).

As for claim 1, Zhang shows measuring a condition of the channel (**Col. 7 line 6-10**); measuring rate (**Col. 7 line 10**) and distortion (**Col. 9 line 62**) characteristics of the

multimedia (**Col. 9 line 34, note: H.26L is MPEG-4**); providing a set of error resilient source encoding procedures (**Col. 7 line 56-57**); providing a set of channel encoding procedures (**Col. 7 line 5-15**); providing a set of transmitter power levels (**Col. 10 line 40**); providing an objective function and a constraint based on energy and distortion (**Col. 9 line 61-62, and Col. 10 line 35**); and selecting jointly a particular error resilient source encoding procedure (**Col. 7 line 56-57**), a particular channel encoding procedure (**Col. 7 line 4-7**), and a particular power level based on the condition of the channel (**Col. 10 line 36**) and the rate and distortion characteristics (**Col. 9 line 62**), while minimizing an objective function and satisfying a constraint (**Col. 9 line 56-67**).

As for claim 2, Zhang shows the objective function minimizes energy while the constraint is a distortion (**Col. 9 line 56-67**).

As for claim 3, Zhang shows the objective function minimizes distortion while the constraint is energy (**Col. 9 line 56-57 and Col. 10 line 36**).

As for claim 4, Zhang shows applying the particular error resilient source encoding procedure to the multimedia to produce a bit stream (**Col. 7 line 57-61**); applying the particular channel encoding procedure to the bitstream to produce an output signal (**Col. 7 line 4-7**); and applying the particular power level to the output signal for transmission (**Col. 10 line 36**).

As for claim 5, Zhang shows the bit stream includes a plurality of layers, and the selecting is performed independently for each layer (**Col. 7 line 56-60**).

As for claim 6, Zhang shows the condition includes bandwidth (**Col. 9 line 58**).

As for claim 10, Zhang shows means for measuring a condition of the channel (**Figure 3 #350**); means for measuring rate and distortion characteristics of the multimedia (**Base station #210**); joint source channel coding-power controller (**Col. 5 line 1**) means for selecting jointly an error resilient source encoding procedure (**Col. 7 line 56-57**), a channel encoding procedure (**Col. 7 line 4-7**), and a power level based on the condition of the channel and the rate and distortion characteristics (**Col. 9 line 62**), while minimizing an objective function and satisfying a constraint (**Col. 9 line 56-67**); a source encoder applying the error resilient source encoding procedure to the multimedia to produce a bit stream (**Col. 7 line 57-61**); a channel encoder applying the channel encoding procedure to the bitstream to produce an output signal (**Col. 7 line 4-7**); and a transmitter applying the particular power level to the output signal for transmission (**Col. 10 line 36**).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (US 7,096,034, Hereinafter, Zhang) in view of Wee et al. (US 7,054,335, ^{①2} Hereinafter, Wee).

As for claim 7, Zhang shows a wireless system transmitting MPEG-4 media, but does not show in which the multimedia include JPEG 2000 images. However, Wee shows in which the multimedia include JPEG 2000 images (**Col. 1 line 63**). It would have been obvious to one of ordinary skill in the art at the time of the invention as made to modify the transmission of MPEG-4 video of Zhang with the transmission of JPEG-2000 of Wee in order to extend of use of transmitting different ISO standard format.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (US 7,096,034, Hereinafter, Zhang) in view of Wang et al. (US 2005/0002337, Hereinafter, Wang).

As for claim 8, Zhang shows a wireless system transmitting MPEG-4 media, but does not show in which the multimedia include moving-JPEG 2000 videos. However, Wang shows in which the multimedia include moving-JPEG 2000 videos [**0066**]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the transmission of MPEG video of Zhang with the Moving JPEG 2000 in order to support resilience adaptation based on multiple encoding of the same media sequence with different levels of error resilience (Wang [0066]).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (US 7,096,034, Hereinafter, Zhang) in view of Xu et al. (US 2005/0094731, Hereinafter, Xu).

As for claim 9, Zhang shows a wireless system transmitting multimedia, but does not show in which the objective function is minimized and the constraint is satisfied by analyzing an energy-distortion curve. However, Xu shows in which the objective function is minimized and the constraint is satisfied by analyzing an energy-distortion curve **[0104]**. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the transmission system of Zhang with the analyzing distortion curve of Xu in order to satisfy the bit-rate constraint and minimal distortion.

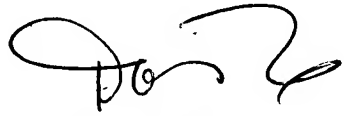
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long P. Nguyen whose telephone number is (571)-272-9740. The examiner can normally be reached on Monday - Thursday 7:30 - 5:00 EST Alternate Friday 7:30-4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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